

AMENDMENTS TO THE CLAIMS

This listing of Claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. – 16. (Canceled)

17. (Currently Amended) A liquid crystal display device comprising a reflector having a plurality of light reflective concave portions arranged randomly adjacent to each other on a surface of a base material, each said light reflective concave portions having a single minimal point and a curved surface with a maximum inclination angle at one side portion, where the side portion having the maximum inclination angle is on a same side of each of the light reflective concave portions, thereof so that the one side portion has a larger reflectance magnitude than an opposing side portion, and a light reflectance peak at a predetermined angle in accordance with a location of the maximum inclination angle, and that opposes a viewpoint of the observer,

wherein the plurality of the concave portions are formed continuously to each other, [[and]] are arranged irregularly adjacent to each other, and each of the concave portions is formed as part of a spherical surface,

wherein each of the light reflective concave portions has a concave shape in cross section, the concave shape having a first curve and a second curve, the first curve having the maximum inclination angle and including one side portion, the first curve and the second curve being concave arcs,

wherein the first curve of one of two adjacent concave portions and the second curve of the other one of the adjacent concave portions are continuously connected to each other at a vertex portion, the vertex portion being formed to have an acute angle

such that the inclination angle thereof is suddenly reversed, so that the entire surface of the second curve has an arc shape, and

wherein the average of the absolute value of an inclination angle of the first curve is larger than the average of the absolute value of an inclination angle of the second curve, and reflection property is such that the incident light is reflected by the surface at the second curve so that the direction of reflection is shifted from the direction of regular reflection with respect to the surface of the base material

wherein the reflection property is such that the incident light which is incident obliquely from above is reflected in a direction shifted toward a direction perpendicular to the surface of the base material, and wherein the second curve is shaped such that when external light is incident at an incidence angle of about 30°, a high reflectance is obtained at a viewpoint of the observer, which corresponds to the light-receiving angle in the range of about 15° to about 45°.

18. (Previously Presented) The liquid crystal display device of claim 17, wherein the base material is reflective, thereby forming a reflective liquid crystal display device.

19. (Withdrawn) The liquid crystal display device of claim 17, wherein the base material is semitransparent and semi-reflective, thereby forming a semitransparent and semi-reflective liquid crystal display device

20. (Withdrawn) The liquid crystal display device of claim 19, wherein the base material comprises a half mirror.

21. (Previously Presented) The liquid crystal display device of claim 17, further comprising a pair of substrates, a liquid crystal layer disposed between the substrates, the reflector disposed on one of the substrates, a transparent intervening layer disposed on the reflector, a color filter layer disposed on the transparent intervening layer, a transparent planarization layer disposed on the color filter layer, a transparent electrode disposed on

the transparent planarization layer, and an alignment layer disposed between the transparent electrode and the liquid crystal layer.

22. (Withdrawn) The liquid crystal display device of claim 17, further comprising a pair of substrates, a liquid crystal layer disposed between the substrates, the reflector disposed on one of the substrates, a transparent intervening layer disposed on the reflector, a color filter layer disposed on the transparent intervening layer, a transparent planarization layer disposed on the color filter layer, and an alignment layer disposed between the transparent planarization layer and the liquid crystal layer, the reflector serving as an electrode.

23. (Withdrawn) The liquid crystal display device of claim 17, wherein the reflector serves as an electrode.

24. (Previously Presented) The liquid crystal display device of claim 17, wherein the maximum inclination angle is in a range of 4° to 35° .

25. (Previously Presented) The liquid crystal display device of claim 17, wherein the depth of the light reflective concave portions is in a range of $0.1\text{ }\mu\text{m}$ to $3\text{ }\mu\text{m}$.

26. (Withdrawn) A method of fabricating a reflector, comprising:
supplying a reflective base material; and
pressing a punch against the reflective base material to form a plurality of light reflective concave portions in the reflective base material, the plurality of light reflective concave portions arranged adjacent to one another with varying depths,
where each of the light reflective concave portions includes a single minimal point and a curved surface with a maximum inclination angle at one side portion, where the side portion having the maximum inclination angle is on a same side of each of the light reflective concave portions.

27. (Withdrawn) The method of claim 26, wherein the act of pressing a punch against the reflective base material comprises randomly changing a stroke of the punch.

28. (Withdrawn) The method of claim 26, wherein the single minimal point is shifted off center.

29. (Withdrawn) The method of claim 26, further comprising forming each of the plurality of light reflective concave portions with a depth ranging from 0.1 μm to 3 μm .

30. (Withdrawn) The method of claim 26, further comprising forming each of the plurality of light reflective concave portions with the maximum inclination angle ranging from 4° to 35°.

31. (Previously Presented) The liquid crystal display device of claim 17, wherein each of the concave portions are formed by a pressing process using an indenter, the shape of each inner surface of each concave portion being defined by the shape of an end portion of the indenter.

32. (Cancelled)